

Title (en)
PHYSICALLY UNCLONABLE FUNCTION DEVICE

Title (de)
PHYSIKALISCH UNKLONBARE FUNKTIONSVORRICHTUNG

Title (fr)
DISPOSITIF DE FONCTION PHYSIQUEMENT NON CLONABLE

Publication
EP 3895371 A1 20211020 (FR)

Application
EP 19835434 A 20191128

Priority

- FR 1872826 A 20181213
- FR 2019000193 W 20191128

Abstract (en)
[origin: WO2020120847A1] The physically unclonable function device (DIS) comprises a set of MOS transistors (TR1i, TR2j) mounted in diodes having a random distribution of respective threshold voltages, and comprising N first transistors and at least one second transistor. At least one output node of the function is capable of delivering a signal, the level of which depends on the comparison between a current obtained using a current circulating in the at least one second transistor and a current obtained using a reference current that is equal or substantially equal to the average of the currents circulating in the N first transistors. A first means (FM1i) is configured to impose on each first transistor a respective fixed gate voltage regardless of the value of the current circulating in the first transistor, and a second means (SM2j) is configured to impose a respective fixed gate voltage on each second transistor regardless of the value of the current circulating in the second transistor.

IPC 8 full level
H04L 9/32 (2006.01); **H03K 19/00** (2006.01)

CPC (source: EP US)
H03F 3/45273 (2013.01 - US); **H03F 3/45488** (2013.01 - US); **H03K 19/0027** (2013.01 - EP US); **H03K 19/00384** (2013.01 - EP US); **H03K 19/17744** (2013.01 - US); **H03L 7/097** (2013.01 - US); **H04L 9/3278** (2013.01 - EP); **H04L 9/3278** (2013.01 - US); **H04L 2209/12** (2013.01 - EP US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2020120847 A1 20200618; CN 113228557 A 20210806; CN 113228557 B 20240705; EP 3895371 A1 20211020; US 11374569 B2 20220628; US 11804842 B2 20231031; US 2022052691 A1 20220217; US 2022321124 A1 20221006

DOCDB simple family (application)
FR 2019000193 W 20191128; CN 201980083137 A 20191128; EP 19835434 A 20191128; US 201917413459 A 20191128; US 202217846362 A 20220622